SUMMARY SCORESHEET
FOR COMPUTING PROJECTED HRS SCORE

SITE NAME: Armstrong World Industries

CITY: South Gate **COUNTY:** Los Angeles

EPA ID #: CAN000909482 **EVALUATOR:** Brian P. Reilly

PROGRAM ACCOUNT #: **DATE:** 08/31/17

LAT/LONG: 33° 57' 20.2" N / 118° 10' 33.8" W

THIS SCORESHEET IS FOR A **PA:** **SI:** X

OTHER:

RCRA STATUS (check all that apply):

- X Generator
- Transporter
- TSDF
- Not Listed in RCRA Database as of (Date):

STATE SUPERFUND STATUS:

- DTSC CalSites (AWP, BKLG, ERAP, or VCP) (Date):
- WQARF (Date):
- X No State Superfund Status (Date): 08/31/17

	S Pathway	S2 Pathway
Groundwater Migration Pathway Score (Sgw)	0.00	0.00
Surface Water Migration Pathway Score (Ssw)	*	*
Soil Exposure Pathway Score (Ss)	*	*
Air Migration Pathway Score (Sa)	*	*
(Sgw2 + Ssw2 + Sse2 + Sam2)		*
(Sgw2 + Ssw2 + Sse2 + Sam2) / 4		*
$\sqrt{(Sgw2 + Ssw2 + Sse2 + Sam2) / 4}$		*

* Pathway evaluated, but not assigned a score (explain):

Surface Water: Surface water runoff is expected to flow from the paved surfaces at the site to adjacent public roadways (i.e., Patata Street), into unpaved on-site stormwater swales, or through directed drainages into the adjacent Los Angeles River. No drinking water intakes are associated with surface water within 15 miles downstream of the site. However, there is the potential for fisheries and/or sensitive environments associated with the Pacific Ocean to exist within this target distance limit.

Soil Exposure and Air: There are no known residences, schools, daycare facilities, or sensitive environments on site. The site is fenced and maintains on-site security personnel. The surface of the western approximately two-thirds of the site is covered with pavement or buildings and the surface of the eastern approximately one-third is covered by vegetation and exposed soil. The site is bordered to the north by approximately 35 single- and multi-family residential properties. There are regularly occupied workplaces on site; however, the total current number of employees is not known.

GROUNDWATER MIGRATION PATHWAY SCORESHEET

Likelihood of Release	Maximum Value	Score	Rationale	Data Quality
1. Observed Release	550	0	1	H
2. Potential to Release				
2a. Containment	10	10	2	E
2b. Net Precipitation Value	10	3	3	H
2c. Depth to Aquifer Value	5	1	4	H
2d. Travel Time	35	5	5	H
2e. Potential to Release [lines 2a x (2b+2c+2d)]	500	90		
3. Likelihood of Release (line 1 or 2e)	550	90		
Waste Characteristics				
4. Toxicity/Mobility	(a)	0	6	H
5. Hazardous Waste Quantity	(a)	0	7	H
6. Waste Characteristics (lines 4 x 5, then use Table 2-7)	100	0		
Targets				
7. Nearest Well Value	50	9	8	H
8. Population				
8a. Level I Concentrations	(b,c)	0	9	H
8b. Level II Concentrations	(b,c)	0	9	H
8c. Potential Contamination	(b,c)	6,035.00	9	H
8d. Population (lines 8a+8b+8c)	(b)	6,035.00		
9. Resources	5	0	10	E
10. Wellhead Protection Area	20	0	11	E
11. Targets (lines 7+8d+9+10)	(b)	6,044.00		
Aquifer Score				
12. Aquifer Score [(lines 3 x 6 x 11)/82500, Subject to a Maximum of 100]	100	0.00		
GROUNDWATER MIGRATION PATHWAY SCORE				
13. Pathway Score (Sgw) (Highest score from line 12 for all aquifers evaluated, subject to a maximum of 100)	100	0.00		

(a) Maximum value applies to waste characteristics category.
(b) Maximum value not applicable.
(c) Value computed on attached calculation sheet.

AQUIFER EVALUATED Sunnyside Aquifer

GROUNDWATER PATHWAY CALCULATIONS FOR POPULATION

ACTUAL CONTAMINATION

Well Identifier	Contaminant Detected	Contaminant Concentration (µg/L)	Benchmark (µg/L)	Level Multiplier* (A)	Apportioned Population Well Serves (B)	Actual Contamination Factor (A x B)
				SUM LEVEL I CONCENTRATIONS		0
				SUM LEVEL II CONCENTRATIONS		0

*** Level Multipliers:**
Level I = 10.
Level II = 1.

POTENTIAL CONTAMINATION

Distance Ring (Miles)	Number of Wells Within Distance Ring	Population Served by Wells Within Distance Ring	Distance Weighted Population Values (Table 3-12)
0.00 to 0.25	0	0	0.00
>0.25 to 0.50	0	0	0.00
>0.50 to 1.00	8	71,328	16,684.00
>1.00 to 2.00	13	86,826	9,385.00
>2.00 to 3.00	27	145,583	21,222.00
>3.00 to 4.00	38	290,968	13,060.00
		SUM	60,351.00
		POTENTIAL CONTAMINATION: SUM/10	6,035.10

AQUIFER EVALUATED Sunnyside Aquifer

HRS RATIONALE
Armstrong World Industries
EPA ID NO.: CAN000909482

1. The Armstrong World Industries (Armstrong) site is located at 5037 Patata St., South Gate, Los Angeles County, California. The site occupies approximately 27 acres in a mixed urban industrial and residential area. The site is bordered to the north by approximately 35 single- and multi-family residential properties.

   Armstrong was founded in 1860 and began operating on the site in approximately 1937 as a manufacturer of resilient flooring. Although the manufacturing plant has expanded several times since its inception, the primary operations have remained relatively consistently the production, storage, and distribution of vinyl floor tiles. On-site operations are primarily conducted on the western third of the site with the central third primarily being used for storage. The eastern third of the site, which borders the Los Angeles River, is unpaved and primarily undeveloped. In addition to the tile manufacturing and distribution areas of the plant, the facility also includes two primary maintenance areas, a hazardous waste storage area (HWSA), a clarifier, and several large dry-chemical silos. At least two underground storage tanks (USTs) and a hazardous waste treatment unit were also historically located on site. Specific hazardous substance storage and disposal practices have not been identified.

   Hazardous substances documented as having been used and/or stored on the site include volatile organic compounds (VOCs), specifically 1,1,1 trichloroethane (TCA) and trichloroethylene (TCE); semivolatile organic compounds (SVOCs), specifically diisononyl phthalate (DINP) and butyl benzyl phthalate (BBP); metals, specifically lead, mercury, and zinc; polychlorinated biphenyls (PCBs); and asbestos.

   Prior to this Site Inspection (SI), no known soil vapor, soil matrix, or groundwater sampling has been conducted at the site. The U.S. Environmental Protection Agency (EPA) has had no known historical involvement with the site.

   In November 2015, Weston Solutions, Inc. (WESTON), on behalf of EPA, conducted the SI sampling event at the site. During the event, WESTON collected soil matrix source samples at depths up to 33 feet (ft) below ground surface (bgs) from eight on-site borings, collected groundwater release samples at depths up to 127 ft bgs from seven on-site borings, and collected secondary objective groundwater samples from three on-site borings.

   For the purposes of this SI, the Gaspur aquifer beneath the site is defined as being between 55 and 75 ft bgs. Water-bearing units identified at shallower depths are defined as being associated with one or more perched (or semiperched) aquifers. The Exposition aquifer is defined as being between 75 and 170 ft bgs; however,

the base of this aquifer is considered approximate because no information was found regarding site-specific lithology below approximately 135 ft bgs. See section 4.2.1 of the SI Report for a more detailed description of the aquifers underlying the site.

Soil matrix samples collected from Boring QWS-DP-9, which is located approximately 350 feet (ft) northwest of the site and was advanced during the concurrently-conducted SI investigation at the QualaWash site (EPA ID No. CAN000909573), are designated as background soil samples for Hazard Ranking System (HRS) purposes. The assigned background concentration for each analyte was determined by amalgamating the concentration data from each of the four discrete-depth soil samples. For any analyte with a reported method detection limit (MDL) exceedance in the dataset, the background concentration was conservatively assigned as the arithmetic mean plus three times the standard deviation. For any analyte without an MDL exceedance, the background concentration was conservatively assigned as the maximum sample quantitation limit (SQL) value within the dataset.

On-site soil samples collected during the SI investigation exhibited concentrations of lead and zinc that exceeded action levels. However, since these elevated concentrations were limited to only two near-surface samples (i.e., 2 ft bgs), since the exhibited concentrations only slightly exceeded action levels, and since neither lead nor zinc were identified at elevated concentrations in on-site groundwater samples, these results are not considered to represent a significant metal source area. None of the soil samples collected during the investigation exhibited concentrations of VOCs, with the exception of common laboratory contaminants, that exceeded their laboratory detection limit. Based on this information, and for HRS purposes, no hazardous substance sources have been documented at the site. Consequently, groundwater action levels were not assigned.

Groundwater release samples collected from the Gaspur aquifer during the investigation exhibited concentrations of arsenic; manganese; 1,1-dichloroethane (DCA); 1,1-dichloroethylene (DCE); cis 1,2 DCE; TCE; and vinyl chloride (VC) that exceeded documented federal and state regulatory benchmarks. The most notable exceedances include 1,1-DCA at 130 micrograms per liter (µg/L), 1,1-DCE at 330 µg/L, TCE at 390 µg/L, and VC at 48 µg/L. The California Maximum Contaminant Level (MCL) for 1,1-DCA is 5.0 µg/L. The federal MCLs for 1,1-DCE, TCE, and VC are 7.0 µg/L, 5.0 µg/L, and 2.0 µg/L, respectively.

Groundwater release samples collected from the Exposition aquifer during the investigation exhibited concentrations of arsenic; 1,1-DCA; 1,1-DCE; 1,2-DCA; and VC that exceeded documented federal and state regulatory benchmarks. The most notable exceedances include 1,1 DCE at 55 µg/L and 1,2-DCA at 31 µg/L. The federal MCL for 1,2-DCA is 5.0 µg/L.

The elevated cis-1,2-DCE and TCE concentrations identified in on-site groundwater samples suggest that one or more VOC source areas may exist near the facility's HWSA, which were not identified during the investigation. Furthermore, the elevated 1,1-DCA; 1,1-DCE; and VC concentrations identified in the samples suggest that one or more VOC source areas may exist near the facility's southern maintenance area, which were also not identified during the investigation.

Hazardous substance sources at the site have not been documented based on the results of the 2015 SI sampling effort. Consequently, a release of hazardous substances from the site to groundwater cannot be established. The site is scored using the deepest known aquifer, the Sunnyside aquifer. An observed release factor value of 0 is assigned per section 3.1.1 in the HRS Final Rule.

A data qualifier of 'H' is assigned since an observed release was not established and since the analytical data were validated by the EPA Region 9 Quality Assurance Office.

References:

Department of Toxic Substances Control; Hazardous Waste Tracking System (HWTS) Reports Search Results, *Armstrong Flooring Inc (EPA ID No.: CAD088387741)*; http://hwts.dtsc.ca.gov/report_list.cfm; data extracted 24 June 2017.

Department of Water Resources, State of California; *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*; June 1961.

U.S. Environmental Protection Agency; Envirofacts Warehouse, TRI query results; *Armstrong World Industries Inc*; https://www.epa.gov/enviro/tri-search; data extracted 24 June 2017.

Google Earth; *33.955614, -118.176066, 30 May 1994, 30 July 2007, 18 October 2016*; http://earth.google.com; data extracted 14 June 2017.

County of Los Angeles Fire Department, Health Hazardous Materials Division; Case Log Sheets, Inspection Reports; 13 June 1983 – 03 June 2009.

Weston Solutions, Inc.; Preliminary Assessment Report, *Armstrong World Industries (EPA ID No.: CAN000909482);* September 2014.

Weston Solutions, Inc.; Site Inspection Report, *QualaWash (EPA ID No.: CAN000909573);* August 2017.

2. The historical hazardous substance containment practices used at the site, if any, could not be adequately determined at this time. A default containment factor value of 10 is assigned per section 3.1.2.1 and Table 3-2 in the HRS Final Rule.

   A data qualifier of "E" is assigned since historical hazardous substance containment practices are not known.

3. A net precipitation value of 3 is assigned per section 3.1.2.2 and Figure 3-2 in the HRS Final Rule.

   A data qualifier of "H" is assigned since the net precipitation factor value is adequately documented.

4. Groundwater beneath the site is typically found within the coarser-grained sediments of the Holocene alluvium (Gaspur aquifer), the upper Pleistocene Lakewood Formation (Exposition and Gage aquifers), and the lower Pleistocene San Pedro Formation (Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside aquifers). The State of California, Department of Water Resources (DWR) Bulletin No. 104 (*Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County*) – Appendix A (Bulletin 104) presents "idealized" geologic cross-sections transecting the Central Subbasin. Cross-section B-B' transects the southern portion of the site. The estimated elevations and depths of the aquifers underlying the site are presented in Table 1.

   The Bulletin 104 cross-sections were also used to identify apparent areas of merged aquifers near the site, including approximately 0.7 mile southeast (Gaspur-Exposition), approximately 0.25 mile west (Exposition-Gage), and approximately 0.24 mile east (Lynwood-Silverado). Aquifer interconnection within 2 miles of the site has been documented between the Gaspur through Gage and between the Lynwood through Silverado. Aquifer interconnections within 2 miles of the site have been established neither between the Gage through Jefferson, the Jefferson and Lynwood, nor the Silverado and Sunnyside.

   The Sunnyside aquifer was evaluated, which at the site is estimated to extend from approximately 1075 ft bgs through at least 1330 ft bgs. A depth to aquifer factor value of 1 is assigned per section 3.1.2.3 and Table 3-5 in the HRS Final Rule.

   A data qualifier of "H" is assigned since the depth to the top of the evaluated aquifer is adequately documented and well exceeds the threshold of 250 feet.

   References:

Department of Water Resources, State of California; *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*; June 1961.

Department of Water Resources, State of California; *California's Groundwater Bulletin 118, Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin*; 27 February 2004.

Table 1: Bulletin 104 Aquifer Elevations near Site

Aquifer	Estimated Elevation (ft amsl)		Estimated Depth (ft bgs)	
	Top	Base	Top	Base
Gaspur	75	50	30	55
Exposition	25	-65	80	170
Gage	-80	-140	185	245
Hollydale	-200	-245	305	350
Jefferson	-290	-350	395	455
Lynwood	-380	-460	485	565
Silverado	-490	-695	595	800
Sunnyside	-970	-1225	1075	1330

Definitions:
amsl = above mean sea level
bgs = below ground surface
ft = feet

References:
DWR, 1961

5. Based on the data collected during the SI investigation, subsurface materials between the surface and 15 ft bgs primarily consisted of light- to dark-brown sands through clayey sands with interbedded lenses (typically less than 1 ft) of dark-brown sandy silts through clays. The lithological identifications are described in the sample log book (Appendix I of the SI Report). Additionally, the interpreted Soil Behavior Type generated from the Cone Penetration Testing (CPT) borings, which extended to a total depth of 135 ft bgs, generally indicated sand units from 29 to 38 ft bgs, 56 to 68 ft bgs, 77 to 87 ft bgs, and 107 to 126 ft bgs. Between these sand units, the soils were generally composed of silts and clays with thin (i.e., less than 2 ft) interbedded lens of coarser-grained materials. The CPT Lithological Profile Reports are presented in Appendix E of the SI Report.

   The geologic materials between the ground surface and the top of the Sunnyside aquifer, as described in Bulletin 104, are generally characterized by confined aquifer systems, which are composed of relatively permeable sands through gravels and are separated by relatively impermeable clay through silt layers. Based on this description and Table 3-6 in the HRS Final Rule, a hydraulic conductivity factor of 10^{-4} is assigned for the permeable units (i.e., aquifers) and a hydraulic conductivity factor of 10^{-6} is assigned for the less permeable units (i.e., aquicludes). Based on the estimated elevations and depths of the aquifers underlying the site (see Table 1), the combined thickness of the units with the lower hydraulic conductivity of 10^{-6} is approximately 500 feet. A travel time factor value of 5 is assigned per section 3.1.2.4 and Table 3-7 in the HRS Final Rule.

   A data qualifier of “H” is assigned since the combined thicknesses and compositions of the multiple aquicludes underlying the site are adequately

documented and since this combined thickness well exceeds the next tier threshold thickness of 100 feet.

Reference:

Department of Water Resources, State of California; *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*; June 1961.

6. Based on the results of the SI Investigation and a review of available historical operational information, no significant hazardous substances sources were identified at the Armstrong site. A toxicity/mobility factor value of 0 is assigned per section 3.2.1.3 and Table 3-9 in the HRS Final Rule.

   A data qualifier of "H" is assigned since the analytical data were validated by the EPA Region 9 Quality Assurance Office.

7. Based on the results of the SI Investigation and a review of available historical operational information, no significant hazardous substances sources were identified at the Armstrong site. A hazardous waste quantity factor value of 0 is assigned per section 2.4.2.2 in the HRS Final Rule.

   A data qualifier of "H" is assigned since no hazardous substances sources were documented at the site.

8. Groundwater beneath the site is typically found within the coarser-grained sediments of the Holocene alluvium (Gaspur aquifer), the upper Pleistocene Lakewood Formation (Exposition and Gage aquifers), and the lower Pleistocene San Pedro Formation (Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside aquifers). The regional groundwater flow direction near the site, which was calculated using data from wells screened within the upper San Pedro Formation (Lynwood and Silverado aquifers), is generally to the southwest with local and temporal variations from approximately west-southwest to southeast. The estimated elevations and depths of the aquifers underlying the site are presented in Table 1.

   Aquifer interconnection within 2 miles of the site has been documented between the Gaspur through Gage and between the Lynwood through Silverado. Aquifer interconnections within 2 miles of the site have been established neither between the Gage through Jefferson, the Jefferson and Lynwood, nor the Silverado and Sunnyside.

   The Sunnyside aquifer was evaluated, which at the site is estimated to extend from approximately 1075 ft bgs through at least 1330 ft bgs. Per section 3.3.1 of the HRS Final Rule, when evaluating the nearest well factor value, include both wells drawing from the aquifer being evaluated as well as those drawing from overlying aquifers. Since the evaluated aquifer is the deepest known aquifer used

for drinking water wells within the target distance limit (TDL), all wells within the TDL, regardless of the sourced aquifer, were considered in the determination of the nearest well factor value.

The nearest active or maintained-standby drinking water well to the site is Well 03. This well is operated by the Tract 349 Mutual Water Company (MWC) and is located approximately 0.53 mile to the northwest of the site. Well 03 is a multi-aquifer well with six distinct screening intervals that correlate to the estimated depths of the Silverado and Sunnyside aquifers. Using the calculated distance between this well and the nearest on-site source area, a nearest well factor value of 9 is assigned based on section 3.3.1 and Table 3-11 in the HRS Final Rule.

A data qualifier of "H" is assigned since the status and location of Well 03 is adequately documented.

References:

Barber-Bridge Drilling Corp.; Well Log, *Tract 349 Mutual Water Co., Well No. 3*; 15 March 1948.

Department of Water Resources, State of California; *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*; June 1961.

Google Earth; *33.955614, -118.176066, 30 May 1994, 30 July 2007, 18 October 2016*; http://earth.google.com; data extracted 14 June 2017.

Water Replenishment District of Southern California; *Engineering Survey and Report*; 02 March 2017.

Weston Solutions, Inc.; Drinking Water Wells - GIS Report, *Armstrong World Industries*; December 2016.

9. There are 86 known active drinking water wells and 4 known maintained-standby wells that are operated by 22 distinct water purveyors located within the TDL (i.e., 4 miles of established on-site sources). All 86 of the active wells, which serve an apportioned population of approximately 595,000, were evaluated. The 4 known maintained-standby wells were not included in the evaluation since their inclusion did not increase the population factor value per section 3.3.2 of the HRS Final Rule.

Water purveyors known to operate wells within the TDL include Tract 349 MWC, City of South Gate, Golden State Water Company (GSWC) – Bell/Bell Gardens, City of Huntington Park, Tract 180 MWC, City of Downey, Rancho Los Amigos Hospital, Maywood MWC No. 3, City of Bell Gardens, Maywood MWC No. 1, City of Lynwood, GSWC – Hollydale, Maywood MWC No. 2, City of Commerce, City of Vernon, CalWater Service – East Los Angeles (ELA), Walnut Park MWC, City of Compton, GSWC – Florence/Graham, Lynwood Park MWC, Park Water Company (Liberty) – Bellflower/Norwalk, and GSWC –

Willowbrook. The drinking water well information for the public systems and the groundwater apportionment calculations are presented in Table 2.

The Sunnyside aquifer was evaluated, which at the site is estimated to extend from approximately 1075 ft bgs through at least 1330 ft bgs. Per section 3.3.2 of the HRS Final Rule, when evaluating the population factor, count those persons served by wells in the evaluated aquifer and those persons served by wells in overlying aquifers. Since the evaluated aquifer is the deepest known aquifer used for drinking water wells within the TDL, all persons served by wells within the TDL, regardless of the sourced aquifer, were considered in the determination of the population factor value.

Since an observed release to the Sunnyside aquifer has not been established for the site, both the Level I concentration factor and the Level II concentration factor were assigned a 0 per section 3.3.2.1 of the HRS Final Rule.

A potential contamination factor value of 6,035 is assigned based on section 3.3.2.4 and Table 3-12 in the HRS Final Rule.

A data qualifier of "H" is assigned since the status and location of evaluated wells is adequately documented.

References:

California Water Service; *California Water Service, 2015 Urban Water Management Plan, East Los Angeles District*; June 2016.

Civiltec Engineering, Inc.; *City of Vernon, 2010 Urban Water Management Plan, Volume 1 - Report*; June 2011.

Department of Water Resources, State of California; *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*; June 1961.

Kennedy/Jenks Consultants; *Golden State Water Company, 2015 Urban Water Management Plan, Bell/Bell Gardens*; July 2016.

Kennedy/Jenks Consultants; *Golden State Water Company, 2015 Urban Water Management Plan, Florence-Graham*; July 2016.

Maddaus Water Management, Inc.; *Liberty Utilities (Park Water) Corp., 2015 Urban Water Management Plan, Final*; 24 June 2016.

Risk Management Professionals, Inc.; *City of Compton, 2010 Urban Water Management Plan*; June 2011.

SA Associates; *City of Lynwood, 2010 Urban Water Management Plan*; July 2011.

State Water Resources Control Board, State of California; Safe Drinking Water Information System; California Public Water Supply Systems query results: *Tract 349 Mutual Water Co., Huntington Park-City Water Dept., South Gate-City Water Dept., Tract 180 Mutual Water Co., GSWC - Bell, Bell Gardens, Maywood Mutual Water Co. #3, Rancho Los Amigos Hospital, Maywood Mutual Water Co.*

#1, Downey - City Water Dept., Lynwood-City Water Dept., Liberty Utilities - Bell Gardens, Maywood Mutual Water Co. #2, Walnut Park Mutual Water Co., GSWC - Hollydale, Vernon-City Water Dept., GSWC - Florence/Graham, Compton-City Water Dept., Commerce-City Water Dept., Lynwood Park Mutual Water Co., California Water Service Co. - ELA, GSWC - Willowbrook, Liberty Utilities - Compton, Sativa-L.A. CWD; https://sdwis.waterboards.ca.gov/PDWW/; data extracted 13 April 2017.

Stetson Engineers, Inc.; *City of Downey, 2010 Urban Water Management Plan*; January 2012.

Weston Solutions, Inc.; Drinking Water Wells - GIS Report, *Armstrong World Industries*; December 2016.

10. The site is located in a mixed industrial and residential area. It is not known if wells located within the target distance limit are used for commercial food crop irrigation, commercial livestock watering, commercial food preparation, commercial aquaculture supply, or a water recreation area supply. For conservative HRS scoring purposes, a resources factor value of 0 is assigned based on section 3.3.3 in the HRS Final Rule

    A data qualifier of "E" is assigned since documentation regarding specific usages of non-drinking water wells was not reviewed during this investigation.

11. It is not known if there are designated wellhead protection areas (WPA) near the site. There is a potential for a designated WPA to be located within the target distance limit; however, since documentation regarding WPA locations was not reviewed during this SI, a WPA factor value of 0 is assigned based on section 3.3.4 in the HRS Final Rule.

    A data qualifier of "E" is assigned since documentation regarding specific usages of non-drinking water wells was not reviewed during this investigation.

Table 2: Groundwater Population Apportionment Calculations

Blended Drinking Water System Purveyor																								
Number of Wells Operated by Each Purveyor Within 4 Miles of the Site																								
Distance Ring (Miles)	Tract 349 Mutual Water Company	City of South Gate	GSWC - Bell, Bell Gardens	City of Huntington Park	Tract 180 Mutual Water Company	City of Downey	Rancho Los Amigos Hospital	Maywood Mutual Water Company #3	City of Bell Gardens	Maywood Mutual Water Company #1	City of Lynwood	GSWC - Hollydale	Maywood Mutual Water Company #2	City of Commerce	City of Vernon	CWSC - ELA	Walnut Park Mutual Water Company	City of Compton	GSWC - Florence/ Graham	Lynwood Park MWC	PWC (Liberty) - Bellflower/ Norwalk	GSWC - Willowbrook	**Total Number of Wells Within Distance Ring**	**Population Served by Wells Within Distance Ring**	**Distance Weighted Population Values (HRS Table 3-12)**
0 to .25																							0	0	0.00
>.25 to 0.5																							0	0	0.00
>0.5 to 1	1	4	1	1	1																		8	71328	16684.00
>1 to 2	1	1	3	1	1	2	2	1	1														13	86826	9385.00
>2 to 3		2	1	2		10	1	1		2	2	2	1	2	1								27	145583	21222.00
>3 to 4				1		7					3		1		4	7	3	3	4	2	1	2	38	290968	13060.00
Total Number of Wells and Imported Water Intakes Supplying Each System																								**SUM:**	60351.00
GW Wells:	2	7	5	5	2	20	3	2	1	2	5	2	2	2	7	9	3	7	7	3	8	2		**SUM/10:**	6035.10
Imported:	0	1	1	1	0	0	0	1	0	1	1	0	1	0	1	1	1	1	1	0	1	1		**Potential Contamination Factor Value:**	**6035.10**
Total:	2	8	6	6	2	20	3	3	1	3	6	2	3	2	8	10	4	8	8	3	9	3			
Percent Imported Water Supplying Each System																									
	1	1	3	28	0	0	0	8	0	5	2	0	20	0	16	37	27	29	18	0	85	<40			
Total Population Served by Each System																									
Total:	7,500	96,057	58,048	17,246	14,000	112,585	8,800	9,500	11,879	3,619	65,965	7,666	6,700	3,828	45,000	150,729	16,180	81,965	65,182	2,300	71,745	10,682			
GW Portion:	7,500	96,057	58,048	17,246	14,000	112,585	8,800	9,500	11,879	3,619	65,965	7,666	6,700	3,828	45,000	150,729	16,180	81,965	65,182	2,300	10,762	10,682			
Apportioned Population Served by Each Intake																									
	3,750	12,007	9,675	2,874	7,000	5,629	2,933	3,167	11,879	1,206	10,994	3,833	2,233	1,914	5,625	15,073	4,045	10,246	8,148	767	1,345	3,561			